ASP-DAC 2014

Report

Yong Lian and Yajun Ha
General Co-Chairs

ASP-DAC 2014

18th Asia and South Pacific Design Automation Conference

Date: January 20-23, 2014
Place: Suntec, Singapore

History: 19th event of the ASP-DAC series
- ASP-DAC 2013 in Yokohama, Japan
- ASP-DAC 2012 in Sydney, Australia
Session Organization

- Regular Sessions
  - 4 parallel breakouts
  - 26 Sessions

- Special Sessions
  - Invited Talks
  - 9 Sessions

- University LSI Design Contest
  - Short Talks & Poster Exhibition
  - 1 Session

- Tutorials (8 three-hour tutorials)
  - 4 system-level and 4 physical-level tutorials
  - Each participant can choose 1 system-level and 1 physical level tutorial to attend

Attendees in 2014 as of 23 Jan, 2014

- Total Number: 282
- Strong attendance from academia
  - Academia: 252 (including 53 students)
  - Industries: 30
- International participation (26 countries/regions)
  - Singapore: 31
  - Overseas: 251
    - ASP: 156
    - NA: 51
    - EU: 41
    - Mid-East: 3

http://www.aspdac.com/
Attendees as of Jan. 23, 2014

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>Host Country</td>
<td>185</td>
<td>304</td>
<td>117</td>
<td>280</td>
<td>36</td>
<td>286</td>
<td>31</td>
</tr>
<tr>
<td>ASP(except host country)</td>
<td>146</td>
<td>105</td>
<td>155</td>
<td>128</td>
<td>151</td>
<td>100</td>
<td>147</td>
</tr>
<tr>
<td>NA</td>
<td>59</td>
<td>64</td>
<td>66</td>
<td>61</td>
<td>48</td>
<td>41</td>
<td>51</td>
</tr>
<tr>
<td>EU</td>
<td>22</td>
<td>18</td>
<td>29</td>
<td>22</td>
<td>24</td>
<td>30</td>
<td>41</td>
</tr>
<tr>
<td>Sub-Total</td>
<td>412*</td>
<td>490</td>
<td>367</td>
<td>491</td>
<td>259</td>
<td>462</td>
<td>270</td>
</tr>
<tr>
<td>Tutorial Only</td>
<td>--</td>
<td>39</td>
<td>162</td>
<td>32</td>
<td>42</td>
<td>14</td>
<td>12</td>
</tr>
<tr>
<td>Total</td>
<td>--</td>
<td>531</td>
<td>529</td>
<td>523</td>
<td>301</td>
<td>476</td>
<td>282</td>
</tr>
</tbody>
</table>

* Designers’ Forum Only(16) and Tutorial Only(N/A) are not included.
** workshop attendees are just estimate


- Thanks to student group rate policy and new change of format, tutorials come back to a reasonable level of attendees

<table>
<thead>
<tr>
<th></th>
<th>2008</th>
<th>2009</th>
<th>2010</th>
<th>2011</th>
<th>2012</th>
<th>2013</th>
<th>2014</th>
</tr>
</thead>
<tbody>
<tr>
<td>#Registrants</td>
<td>126</td>
<td>113</td>
<td>216</td>
<td>111</td>
<td>42</td>
<td>106</td>
<td>65</td>
</tr>
</tbody>
</table>

- Special rate for student group
  - 4 or more students as a group
- Change of format
  - 3-hour, 4 parallel tutorials each half day
  - Options to select 2 out of 8 topics
### Delegate Summary

<table>
<thead>
<tr>
<th>Country</th>
<th>Number of Delegates</th>
</tr>
</thead>
<tbody>
<tr>
<td>1 Japan</td>
<td>53</td>
</tr>
<tr>
<td>2 USA, Canada</td>
<td>50 (46, 4)</td>
</tr>
<tr>
<td>3 Hongkong/China</td>
<td>46</td>
</tr>
<tr>
<td>4 Europe</td>
<td>41</td>
</tr>
<tr>
<td>5 Singapore</td>
<td>31</td>
</tr>
<tr>
<td>6 Taiwan</td>
<td>27</td>
</tr>
<tr>
<td>7 Korea</td>
<td>16</td>
</tr>
<tr>
<td>8 India</td>
<td>5</td>
</tr>
<tr>
<td>9 Australia</td>
<td>6</td>
</tr>
<tr>
<td>10 Israel, Jordan, Hongkong/China, US</td>
<td>5 (1 each)</td>
</tr>
</tbody>
</table>

**Total:** 282 (263 paid)

### Tutorial Delegates

<table>
<thead>
<tr>
<th>Tutorial</th>
<th>Instructor</th>
<th>Credit</th>
</tr>
</thead>
<tbody>
<tr>
<td>#PD1</td>
<td>Prof. Massoud Pedram</td>
<td>12</td>
</tr>
<tr>
<td>#PD2</td>
<td>Prof. Tsung-Yi Ho and Prof. Krishnendu Chakrabarty</td>
<td>16</td>
</tr>
<tr>
<td>#PD3</td>
<td>Prof. Fadi Kurdahi and Prof. Ahmed Eltawil</td>
<td>12</td>
</tr>
<tr>
<td>#PD4</td>
<td>Prof. Sheldon Tan and Prof. Hai Wang</td>
<td>22</td>
</tr>
<tr>
<td>#SD1</td>
<td>Prof. Wolfgang Mueller and Prof. Gunar Schirner</td>
<td>10</td>
</tr>
<tr>
<td>#SD2</td>
<td>Mr. Alex Goryachev and Mr. Ronny Morad</td>
<td>15</td>
</tr>
<tr>
<td>#SD3</td>
<td>Prof. Rolf Drechsler and Dr. Rainer Findenig</td>
<td>8</td>
</tr>
<tr>
<td>#SD4</td>
<td>Prof. Zhiru Zhang and Prof. Deming Chen</td>
<td>17</td>
</tr>
</tbody>
</table>
Keynote Addresses

I. “Title: All Programmable SOC FPGA for Networking and Computing in Big Data Infrastructure”
   Ivo Bolsens
   Senior VP and CTO, Xilinx, USA

II. “Designing Analog Functions without Analog Transistors”
    Georges Gielen
    Professor, Katholieke Universiteit Leuven, Belgium

III. “Beyond Charge-based Computing”
     Kaushik Roy
     Professor, Purdue University, USA

IV. “The Art of Innovation - How Singapore Will Continue to Drive the Progress in Semiconductor Technologies”
    Ulf Schneider
    Managing Director, Lantiq Asia Pacific
    President, SSIA, Singapore

University LSI Design Contest

◆ 10 excellent designs are accepted out of 19 submissions from five countries/areas

◆ Best Design Award
   □ A Dual-loop Injection-locked PLL with All-digital Background Calibration System for On-chip Clock Generation
      Wei Deng, Ahmed Musa, Teerachot Siriburanon, Masaya Miyahara, Kenichi Okada, Akira Matsuzawa
      (Tokyo Institute of Technology, Japan)

◆ Special Feature Award
   □ A Single-Inductor 8-Channel Output DC-DC Boost Converter with Time-limited Power Distribution Control and Single Shared Hysteresis Comparator
      Jungmoon Kim, Chulwoo Kim (Korea Univ., Republic of Korea)
University LSI Design Contest - Impression

- Accepted papers quality are high with good oral presentation
- Wide coverage on different area:
  - 5 RF + 3 Analog + 2 Digital
- Submissions to this year’s ASP-DAC are from 5 countries/areas in Asia: Japan, Korea, China, Singapore, India.
- UDC at ASP-DAC is established as a high-level design contest for Asian universities.

Financial Support

- Singapore Tourist Board to support 10 conference and 11 tutorial registrations for students.
- IEEE CEDA to support the lunch boxes for University Design Contest
Supporter’s exhibition

- 2 companies (Silicon Clound and Toshiba) joined

- Exhibitors showed interesting exhibitions and demos

- Many people visited their booths and exhibitions are successful

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